

ABSTRACT

An apparatus, method and computer program product for performing computer aided diagnosis on temporal subtraction images of objects. A mode of a gray-level histogram is identified, and a gray-level threshold is established at a predefined fraction of this modal value. All pixels with gray levels below this threshold that lie within the lung regions of the temporal subtraction image remain "on," while all other pixels are set to zero. Area and circularity requirements are imposed to eliminate false-positive regions. Areas of pathologic change identified in this manner may be presented as outlines in the subtraction image or as highlighted regions in the original radiographic image so that, in effect, temporal subtraction becomes a "background" process for computer-aided diagnosis. The present invention is also directed to method, apparatus, and computer program product for performing temporal subtraction on energy subtraction images, with or without subsequent computer aided diagnosis, of objects.